



THERMOSET RESINS FOR COMPOSITES





HELIOS
RESINS FOR
COMPOSITES
OFFER

**FLEXIBLE
HIGH-QUALITY**

RELIABLE

COMPOSITE
SOLUTIONS.



RESINS SUPPLIER SINCE 1908

Composite resins since 1964

GOLDEN RESINS

Helios Resins is a separate business unit of the Helios Group producing the highest quality liquid resins for advanced coating and composite manufacturers globally. Today, Helios Resins produces over 60,000 tons of liquid resins annually, including coating resins, composite resins, and polyester polyols for PU flexible foams. In addition to our coating resin brands, the composite resin brands - COLPOLY and COLVINYL - have achieved a strong market position and are trusted for their quality and reliable service. We currently serve over 50 countries worldwide, including Germany, Italy, France, Poland, Switzerland, Russia, the South African Republic, Morocco, Turkey, the UAE, Saudi Arabia, Thailand, and many others.

QUALITY OF SERVICE

We are committed to providing flexible and reliable service while satisfying your specific requests. Helios Resins ensures quality, stability and reproducibility of every delivery. With the know-how, resulting from over 100 years of experience in synthetic resins and over 50 years in composite resins, together as partners we can solve your challenges. Our experts produce tailor-made resins for your particular needs and offer support in developing your applications.

DEVELOPED BY ADVANCED TECHNOLOGY

Our laboratories and production facilities are fully equipped with the most advanced technology enabling the development and production of resins. Our R&D has advanced skills as well as equipment for polyester and acrylic chemistry, including synthesis under pressure. Our production lines were upgraded in 2014 with a new pilot and large-scale reactor, resulting in new types of environmentally-friendly resins, as well as increased production capacities.

OUR STRENGTHS

- FLEXIBILITY TO MEET CUSTOMER'S REQUIREMENTS
- ON-TIME DELIVERY
- HIGH QUALITY OF EVERY ORDER

COLPOLY

Unsaturated
polyesters

COLVINYL

Vinyl
esters



I. GENERAL PURPOSE RESINS

GENERAL PURPOSE LAMINATING RESINS FOR
HAND LAY-UP AND SPRAY-UP APPLICATIONS

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 7233	DCPD	38	900	30 (0/1)	1.5
COLPOLY 7243	OPA	42	1100	30 (0/1)	1.5
COLPOLY 7246	OPA	43	1800	28 (0/2)	1.5
COLPOLY 733-10	DCPD	38	1000	30 (0/1)	2.5
COLPOLY 738-95	Hybrid VE/DCPD	39	1200	40 (0/1)	3.0
COLPOLY 7528	OPA	42	1000	20 (0/2)	2.5
COLPOLY 7805	IPA	44	900	Various (0/1.5)	3.5
COLVINYL VE 101 AT	VE	46	1200	18 (0/2)	4.5

HIGH PERFORMANCE LAMINATING RESINS FOR
HAND LAY-UP AND SPRAY-UP APPLICATIONS

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 7227	OPA	43	1450	35 (0/1)	2.5
COLPOLY 7815	IPA/NPG	41	1400	15 (0/2)	3.0



TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
55	80	Preaccelerated, thixotropic, (possible LSE version on request)
60	65	Preaccelerated, thixotropic, LSE, low peak temperature, promoted
60	65	Preaccelerated, thixotropic, LSE, low peak temperature, Lloyd's approval
65	65	Preaccelerated, thixotropic, LSE, low peak temperature, Lloyd's approval (without LSE additive version COLPOLY 733-15)
70	105	Preaccelerated, thixotropic, barrier coat
85	105	Preaccelerated, thixotropic, LSE, low peak temperature, promoted
85	85	Preaccelerated, thixotropic, medium thix index, chemical resistant, (possible LSE version on request), Lloyd's approval
80	105	Preaccelerated, thixotropic, barrier coat

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
70	75	Preaccelerated, thixotropic, LSE, low peak temperature, Lloyd's approval
65	80	Preaccelerated, thixotropic, LSE, low peak temperature, Lloyd's approval



II. CASTING AND CLOSED MOULDING RESINS

CASTING RESINS

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 7321	DCPD	27	1400	45 (1/1)	3.0
COLPOLY 732-D3	DCPD	35	380	15 (1/1)	3.0
COLPOLY 733-90 M	DCPD	34	420	20 (1/1)	2.5
COLPOLY 733-90	DCPD	32	320	8 (0.5/2)	2.5
COLPOLY 7525	OPA	34	420	8 (0.5/2)	2.5
COLPOLY 7524 AM-GS	OPA	36	400	14 (0/1)*	3.5
COLPOLY 7167	IPA/NPG	33	1100	10 (1/2)	2.0

RESIN TRANSFER MOULDING (RTM)

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 7524-03	DCPD	37	220	9 (0.8/1)*	4.0
COLPOLY 7524/8	OPA	37	220	9 (0.8/1)*	3.5
COLPOLY 7608	DCPD	32	300	15 (0/2)	3.0

SHEET MOULDING COMPOUND (SMC), BULK MOULDING COMPOUND (BMC)

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 757	OPA	36	1200	n.m.	2.0
COLPOLY 768	Maleic	32	3000	n.m.	1.5
COLPOLY 783-02	IPA	33	3800	n.m.	3.0
COLPOLY 7572	OPA	35	1400	n.m.	1.5
COLPOLY 7795	Maleic	35	180	n.m.	2.0
COLPOLY LPA 2600	Saturated polyester	30	1400	n.m.	n.m.



TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
70	80	Artificial marble and onyx
70	80	Artificial marble and onyx
60	100	Artificial marble and onyx
60	100	Polymer concrete, low viscosity, high reactivity
80	105	Polymer concrete, high reactivity
75	90	Resin is designed and recommended for use with Gruber Systems' composites manufacturing equipment , where quartz filler is utilised to manufacture cast polymer sanitaryware, kitchen sinks and other architectural surfacing products, * AAP curing
90	105	Solid surface, contain acrylic (possible preaccelerated and different viscosity)

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
75	85	Excellent impregnation * AAP curing
80	90	Excellent impregnation * AAP curing
70	75	Fire retardant, halogenated

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
40	115	High resistance to heat deformation, compatible with LP additives
60	120	Low shrink SMC/BMC application
70	105	High crack resistance, high resistance to heat deformation, high viscosity and high reactivity
70	120	High resistance to heat deformation, compatible with LP additives
40	130	Basic resin for LS formulation
n.m.	n.m.	LPA additive

III. RESINS ARRANGING FOR TYPICAL APPLICATIONS

SPRAY-UP LAMINATING RESINS FOR ACRYLICS AND/OR ABS

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 724 A LSE	DCPD	40	200	10 (0/2)	1.5
COLPOLY 7331 LV	DCPD	37	150	8 (0/2)	2.5
COLPOLY 736 WAT	DCPD	38	200	14 (0/2)	2.5

CONTINUOUS LAMINATING

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 721 S	DCPD	36	250	18 (1/1)	3.5
COLPOLY 736 S	DCPD	30	280	18 (1/1)	2.5
COLPOLY 739 S	DCPD	32	240	18 (1/1)	2.5

PULTRUSION

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY RP 7015/8	DCPD	35	350	8 (2 BP)	2.5
COLPOLY 7558-02	OPA	35	700	9 (2 BP)	3.0
COLPOLY 779	Maleic	36	1800	8	1.5
COLPOLY 7800	IPA	35	950	(2 BP) Various	4.5
COLVINYL VE 105 LV	VE	34	500	10 (2 BP)	5.5

VACUUM INFUSION

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 7810 AI	IPA/NPG	41	250	90 (0/1.5)	3.0

FILAMENT WINDING

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY RP 7015/9	DCPD	30	430	Various	2.5
COLPOLY 7166	IPA/NPG	40	600	Various	4.5
COLPOLY 7524	OPA	35	750	14 (0.8/1)	2.5
COLPOLY 7543	OPA	35	850	10 (1.5/2)	3.5
COLPOLY 7854	IPA/TPA	40	400	Various	4.0

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
55	70	Formulated to be filled with mineral fillers, preaccelerated, LSE (possible non LSE version on request), good adhesion on ABS
65	70	Formulated to be filled with mineral fillers, preaccelerated, LSE (possible non LSE version on request), good adhesion on PMMA
60	85	White pigmented, accelerated, thixotropic, LSE, formulated to be filled with mineral fillers, good adhesion on ABS and PMMA

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
60	80	Low viscosity, UV stabilised, good glass wetting, continuous sheet curing with MIBK, discontinuous laminating with MEKP or AAP
65	85	Low viscosity, low styrene contain, UV stabilised, good glass wetting, continuous sheet curing with MIBK, discontinuous laminating with MEKP or AAP
60	95	Low viscosity, UV stabilised, good glass wetting, continuous sheet curing with MIBK, discontinuous laminating with MEKP or AAP

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
60	95	Medium reactive resin, good mechanical properties, good glass wetting
70	100	Excellent mechanical properties, high impact strength, high HDT
35	130	High resistance to heat deformation, high reactivity
90	100	Fast through cure (possible different viscosity and solids content modified with LS additives etc.)
85	105	Optimal wetting of the glass fiber, good mechanical properties and excellent corrosion resistant, high HDT

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
65	80	Rapid fill times, resistance to print-through, preaccelerated, Lloyd's approval

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
70	85	Chemical resistance, low styrene content
60	90	Excellent mechanical properties, high HDT, liner, adhesion on PVC
80	105	Chemical resistance
75	90	Excellent mechanical properties, outstanding durability, chemical resistance
90	100	Chemical resistance



IV. SPECIALITY RESINS

BASE RESINS FOR GEL COATS, TOP COATS AND PIGMENT CONCENTRATES

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 7100	Maleic	free	350		
COLPOLY 7220	OPA	36	500	10 (1/2)	2.5
COLPOLY 7160	IPA/NPG	40	550	6 (1/2)	4.0
COLPOLY 7172	IPA	33	1250	8 (1/2)	5.0

RESINS FOR PUTTIES

PRODUCT	CHEMICAL NATURE	REACTIVE MONOMER CONTENT (%)	VISCOSITY AT 25°C (Brookfield, #2/10 rpm) (mPa.s)	GEL TIME AT 25°C (MIN) CURING SYSTEM (% Co Acc. 1%/MEKP-50)	ELONGATION AT BREAK (%)
COLPOLY 7281	DCPD	37	380	8.5 (2 BP)	n.m.
COLPOLY 7284	DCPD	35	550	8 (2 BP)	n.m.
COLPOLY 7291	DCPD	35	750	12 (2 BP)	n.m.
COLPOLY 7294	THPA	36	800	5 (2 BP)	n.m.
COLPOLY 7296	THPA	33	700	8.5 (2 BP)	n.m.



TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
		Grinding medium for pigment concentrates
70	80	Base resin for gel coats, Lloyd's approval
85	100	Base resin for gel coats, UV stabilised, Lloyd's approval
85	95	Base resin for gel coats, Lloyd's approval

TENSILE STRENGTH (MPa)	HDT (°C)	REMARKS
n.m.	n.m.	Pre-accelerated with amines, for use in the manufacture of car body fillers and putties for BPO cure
n.m.	n.m.	Pre-accelerated with amines, for use in the manufacture of car body fillers and putties for BPO cure
n.m.	n.m.	Pre-accelerated with amines, for use in the manufacture of car body fillers and putties for BPO cure, high flexibility
n.m.	n.m.	Pre-accelerated with amines, for use in the manufacture of car body fillers and putties for BPO cure, can be combined with other Colpoly grades (7281, 7284, 7291, 7296) to increase their hardness
n.m.	n.m.	Pre-accelerated with amines, for use in the manufacture of car body fillers and putties for BPO cure



ISO 9001
ISO 14001
BUREAU VERITAS
Certification



European company
Global delivery

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